

WE CLAIM:

1. A memory device comprising:
a plurality of cells arranged into an array, where the array includes a plurality of word lines and a plurality of bit lines, where a cell in the plurality of cells further comprises :
an antiferromagnetic layer disposed adjacent to a soft layer of ferromagnetic material, where the antiferromagnetic layer is also disposed on a side of the soft layer that is opposite to a hard layer of ferromagnetic material; and
a spacer layer of non-ferromagnetic material disposed between the hard layer and the soft layer.